

REMARKS

Applicants' undersigned attorney thanks the Examiner for her comments, and for her thoughtful analysis of the prior art. Independent Claims 1, 12 and 32 have been amended to specify that the breathable film comprises a breathable core layer coextruded between two outer skin layers. The core layer has the recited composition. Support for the amendment is found on page 10, lines 4-9.

a) Interview Summary

Applicants' attorney thanks the Examiner for the courtesy of the telephone interview on 16 February 2005. As explained in the interview (and further explained below), independent Claims 1, 12 and 32 have been amended to better distinguish over the prior art. The primary reference, International Publication WO 99/14047 to Haffner et al., discloses the use of a single-site catalyzed ethylene copolymer only in the outer (bonding) layer(s) of a film, where the polymers are desirably amorphous to improve bonding between the film and a substrate. There is no disclosure or suggestion to include such a polymer in the core layer of a multilayer film, wherein the core layer is coextruded between two outer skin layers.

The other references focus on single-layer films. EP 1,070,736 discloses a single-layer film in which linear low density polyethylene (having a density of 0.915-0.935 g/cm³) is blended with polypropylene and with a compatibilizer, which is a propylene-ethylene copolymer containing 60-80% by weight ethylene and 20-40% by weight propylene (p. 3, lines 30-36). Propylene-ethylene copolymers having substantial amounts of both propylene and ethylene are known compatibilizers for polypropylene and polyethylene. The copolymer provides the film with improved impact strength, tear strength and stretch properties, which are typical properties resulting from compatibilization (p. 3, lines 30-36). The disclosed polymer mixture does not include a single-site catalyzed ethylene polymer.

International Publication WO 98/44025 to Stopper et al. discloses a single-layer high bonding film, which eliminates the need for outer bonding layers (Fig. 1). This is contrary to Applicants' claims, which require the film to have at least three layers. The core layer of Applicants' claimed film is surrounded by outer skin layers and does not function as a bonding layer.

The Examiner indicated that she will perform another search before deciding how to act on the Amendment.

b) Claim Rejections Based On 35 U.S.C. §102(b)

The Examiner rejected Claims 1-2, 4-6, 32, 35-37, 41-43, 45 and 47 under 35 U.S.C. §102(b) as anticipated by International Publication WO 99/14047 to Haffner et al. This rejection is respectfully traversed.

Regarding Claims 1-2 and 4-6, Haffner et al. does not disclose a breathable, stretch-thinned film including a breathable core layer coextruded between two outer skin layers, wherein the core layer includes a single-site-catalyst-formed ethylene polymer, a calcium carbonate filler, and an incompatible polymer.

Regarding Claims 32, 35-37, 41-43 and 45, Haffner et al. does not disclose a breathable laminate comprising a breathable film including a core layer coextruded between two outer skin layers, the core layer including a single-site-catalyst-formed ethylene polymer, an incompatible polymer, and a particulate filler.

Regarding Claim 47, the rejection is not proper because the underlying independent Claim 12 was not rejected. Claim 47 is patentable over Haffner et al. for at least the same reasons as Claim 12.

c) Claim Rejections Based On 35 U.S.C. §103(a)

The Examiner rejected Claims 1-2, 4-13, 16-21, 23-25, 27-33, 35-45 and 47 under 35 U.S.C. §103(a) as obvious over European Patent Application 1,070,736 to Lee et al. in view of International Publication WO 98/44025 to Stopper et al. and International Publication WO 99/14047 to Haffner et al. This rejection is respectfully traversed.

Lee et al. merely discloses a composition for a single-layer film. Lee et al. does not disclose a multilayer film including a breathable core layer coextruded between two outer skin layers as recited in Applicants' Claims 1, 12 and 32. Lee et al. also does not disclose a single-site-catalyst-formed ethylene polymer as recited in Claims 1 and 32.

Furthermore, Lee et al. discloses a composition including linear low density polyethylene (LLDPE) and polypropylene which, taken alone, would be incompatible with each other (See Claim 1 of Lee et al.). However, the composition also includes an ethylene-

propylene copolymer which, at intermediate ethylene and propylene contents, serves as an impact modifier and compatibilizer between LLDPE and polypropylene. As indicated on page 3, lines 30-36, the ethylene-propylene copolymer has an ethylene content of 60-80% and complements impact strength, transverse directional strength and elongation in films. These factors clearly illustrate that the ethylene-propylene copolymer compatibilizes the LLDPE and polypropylene. Thus, the reference teaches away from the use of an ethylene copolymer matrix which is incompatible with polypropylene.

A proper comparison of Lee et al. with Applicants' claims requires considering the LLDPE and the compatible ethylene-propylene copolymer as forming the matrix. For instance, Applicants' claims state that the matrix may include a compatible olefin copolymer. The matrix disclosed in Lee et al. is plainly compatible with polypropylene. Lee et al. fails to disclose a polymer that is incompatible with the matrix of LLDPE and ethylene-propylene copolymer.

Stopper et al. also discloses a composition for a single-layer film, which film is laminated to a nonwoven web (Fig. 1). The single-layer film includes a bonding agent, thus alleviating the need for one or two outer bonding layers (pp. 9-10). Stopper et al. does not disclose a multilayer film including a breathable core layer coextruded between two outer skin layers as recited in Applicants' Claims 1, 12 and 32. To the contrary, the inclusion of skin layers would defeat the effectiveness of the bonding agent in the primary layer. Stopper et al. does not disclose a single-site catalyzed ethylene polymer as recited in Claims 1 and 32.

Stopper et al. discloses a long list of polymers that may be included in the film (pp. 7-8). Some of the polymers would be incompatible with each other if used in combination. However, Stopper et al. does not suggest, and does not motivate a person skilled in the art to select specific polymers that are incompatible with each other and use them together.

Furthermore, as explained above, Lee et al. teaches compatible polymer combinations, and teaches away from incompatible combinations. Thus, combining Lee et al. and Stopper et al. to arrive at an incompatible polymer combination would be irrational from the standpoint of persons skilled in the art.

Haffner et al. discloses a breathable barrier laminate including a breathable base film, a breathable intermediate amorphous polymer layer and a breathable outer fibrous web (p. 3, lines 28-31). Again, there is no disclosure of a multilayer film including a breathable core layer coextruded between two outer skin layers as recited in Applicants' Claims 1, 12 and 32.

Haffner et al. discloses a long list of polymers that may be used in the breathable base film (p. 11, lines 1-17). While some of the polymers would be incompatible with each other if used in combination, there is no suggestion to select specific polymers that are incompatible and use them together. There is no suggestion to use a single-site catalyzed ethylene polymer in the base layer.

Haffner et al. does disclose using a single-site catalyzed ethylene polymer in the intermediate layer of the laminate, which is the outer (bonding) layer of the two-layer film (p. 12, line 20 – p. 13, line 30). This is contrary to Applicants' claims, which require such a polymer in the core layer of a multilayer film. Haffner et al. discloses that the single-site catalyzed ethylene copolymer can be mixed with other polymers (p. 13, line 31 – p. 14 line 22). However, all of the listed polymers are amorphous or semi-crystalline, and include a significant ethylene component. None of the blending polymers is considered incompatible with the single-site catalyzed ethylene polymer. Furthermore, because the layer is a bonding layer, a person skilled in the art would not be motivated to combine incompatible polymers. Such combinations are thermodynamically separable and are less suitable for bonding than compatible polymer blends.

Furthermore, as explained above, it would be irrational for persons skilled in the art to combine references where one or more references teaches away from using combinations of incompatible polymers. The combined references would not lead persons skilled in the art to make Applicants' claimed invention.

The Examiner rejected Claims 3 and 14-15 under 35 U.S.C. §103(a) as obvious over Lee et al. in view of Stopper et al., Haffner et al., and U.S. Patent 6,328,723 to Burns, Jr. et al. This rejection is respectfully traversed. The rejected claims depend from Claim 1 or 12 and are patentable for at least the same reasons, explained above.

Furthermore, contrary to the Examiners' assertion, Burns, Jr. et al. does not state that the polymers listed at Col. 6, lines 35-50 are "equivalent" to each other in breathable, stretch-thinned films. Instead, the passage merely indicates that the listed polymers are known.

d) Request For Entry Of Information Disclosure Statement

The Examiner indicated that the Information Disclosure Statement filed 19 June 2001 is missing from the file. Enclosed are copies of the Information Disclosure Statement and the stamped, return receipt postcard. Applicants request formal entry of the Information Disclosure Statement.

e) Conclusion

Applicants believe that the claims, as presented, are in condition for allowance. If the Examiner feels that any issues remain unresolved, then Applicants' attorney requests a telephone call from the Examiner, and a telephone interview.

Respectfully submitted,



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Attachments